

## **REMARKS**

### **I. Overview**

These remarks are set forth in response to the Latest Non-Final Office Action. Presently, claims 24-27, 29-32, and 34-37 are pending in the Patent Application. Claims 1-23, 28, 33, and 38 have been cancelled previously. Claims 24, 29, and 34 are independent in nature. In the Latest Non-Final Office Action, the specification has been objected to. Further, claims 24-38 have been rejected under 35 U.S.C. § 103(a).

In response, *Applicant has amended claim 34 to address the objection. Although Applicant disagrees with the art rejections, Applicant has amended independent claims 24, 29, and 34 in an effort to facilitate expeditious prosecution of the present application. The support for the amendment can be found in previous claims 28, 33, and 38.*

### **II. Specification**

On page 2 of the Latest Non-Final Office Action, Examiner objects to the specification as failing to provide proper antecedent basis for the claimed subject matter. Specifically, Examiner asserts that the “machine

readable storage medium” is not defined in Applicant’s specification and such correction should be made because as is, the medium could include non-statutory subject matter including signals.

Applicant respectfully disagrees. First, it is noted that the phrase "machine readable storage medium" is a commonly-accepted and often-used term to describe a category of claims, just as do the terms "method" and "device," which do not require an explicit definition or antecedent basis in the specification. Second, a signal cannot be a storage medium because a signal does not "store" anything; instead, a signal transmits information. Storage implies some type of temporal permanence. However, a signal is transitory. For that reason, those skilled in the art, as well as the Honorable Board in the decision rendered within Ex parte Mehta (Appeal No. 2008-004853), recognize there is a difference between a transmission medium (e.g., light, electricity, EMF, etc.) and a storage medium (e.g., memory, hard disk, CD-ROM, etc.).

Further, a “storage medium” is well-known to mean “any device or recording medium into which data can be copied and held until some later time, and from which the entire original data can be obtained.”

(answers.com) By comparison, a signal cannot hold data until some later time due to its transitory nature. This clearly indicates that a “storage medium” is not a transitory medium and thus is statutory subject matter.

Although Applicant disagrees with the objection, Applicant has amended claim 34 to recite a machine readable storage medium to explicitly exclude transitory medium such as signal.

### III. Rejections Under 35 U.S.C. § 103

On pages 2-9 of the Latest Non-Final Office Action, Examiner rejects claims 24-38 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0116234 by Nagasawa in view of U.S. Patent Application Publication No. 2005/0177629 by Betge.

With respect to the Examiner's determination of obviousness, Section 2141 of the Manual of Patent Examining Procedure (M.P.E.P.) sets forth guidelines intended to assist personnel of the United States Patent and Trademark Office in making a proper determination of obviousness under 35 U.S.C. 103, and to provide an appropriate supporting rationale in view recent judicial developments in regard to 35 U.S.C. § 103. Included as part

of M.P.E.P. 2141 are the "Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in KSR International Co. v. Teleflex Inc.," 73 Fed. Reg. 57,526 (2007) (hereinafter the Examination Guidelines). Section III of M.P.E.P. 2141 is entitled "Rationales To Support Rejections Under 35 U.S.C. 103."

Referring to Section III of the Examination Guidelines, the following is a list of rationales that may be used to support a finding of obviousness under 35 U.S.C. § 103:

- (A) Combining prior art elements according to known methods to yield predictable results;**
- (B) Simple substitution of one known element for another to obtain predictable results;
- (C) Use of known technique to improve similar devices (methods, or products) in the same way;
- (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;
- (E) "Obvious to try" - choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;
- (F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art;
- (G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

Upon reviewing the Examiner's analysis on pages 2-9 of the Latest Non-Final Office Action, the Examiner appears to be employing rationale (A). If the Examiner is not relying upon rationale (A), Applicant requests that the

Examiner clearly identify the rationale, as described in the Examination Guidelines, being employed by the Examiner in rejecting the claims under 35 U.S.C. § 103.

With respect to rationale (A), the Examination Guidelines set forth a precise process for which the Examiner must follow in order to establish a prima facie case of obviousness under 35 U.S.C. § 103(a). Specifically, to reject a claim based on this rationale, Office personnel must resolve the Graham factual inquiries. Thereafter, Office personnel must then articulate the following:

- (1) **a finding that the prior art included each element claimed**, although not necessarily in a single prior art reference, with the only difference between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference;
- (2) a finding that one of ordinary skill in the art could have combined the elements as claimed by known methods, and that in combination, each element merely would have performed the same function as it did separately;
- (3) a finding that one of ordinary skill in the art would have recognized that the results of the combination were predictable; and
- (4) whatever additional findings based on the Graham factual inquiries may be necessary, in view of the facts of the case under consideration, to explain a conclusion of obviousness.

In articulating a finding that the prior art included each element claimed in a rejected claim, must establish a proper claim construction and then compare

the properly construed claim to the prior art.”<sup>1</sup> It is the position of Applicant that under M.P.E.P. 2141 and rationale (A) of the Examination Guidelines set forth therein, Examiner has not adequately articulated a finding that the prior art included each properly construed element claimed with the only difference between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference.

In this regard, claims 29 recites a method for estimating a service level agreement (SLA) breach value for a resource. For the convenience of the Examiner, claim 29 is reproduced herein as follows:

29. A method for estimating a service level agreement (SLA) breach value for a resource, comprising:  
retrieving historical performance data for the resource from a performance history database;  
receiving a compliance percentage;  
generating, with a computer hardware system, the estimated SLA breach value by processing the historical performance data for the resource and based upon the compliance percentage; and  
displaying, using the computer hardware system, the estimated SLA breach value.

Integral to claim 29 (and also claims 24 and 34) is the generation of the estimated SLA breach value by processing retrieved historical performance

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<sup>1</sup> *Medichem, S.A. v. Rolabo, S.L.*, 353 F.3d 928, 933 (Fed. Cir. 2003) (internal citations omitted).

data for the resource and based upon a received compliance percentage.

Applicant submits that these limitations are not disclosed by any of the cited references or any combination thereof. In rejecting the limitation of retrieving historical performance data for the resource, Examiner stated on page 5 of the Latest Non-Final Office Action the following:

retrieving historical performance data for the resource from a performance history database; (See figures 1-2 and paragraphs [0058] – [0062], Nagasawa teaches a database containing performance data for resources)

For the convenience of the Examiner, paragraphs [0058]-[0062] of Nagasawa cited by the Examiner are reproduced below:

[0058] The brokering system 200 accepts request for a service to be realized by optimum resource utilization from a customer 101. Based on the SLA (service level request details such as date/time of utilization, desired service level, desired price, etc.) and the credit data 205, the SLA performance simulation server executes quantitative evaluation of the performance and capacity of resources according to the service type to decide whether there are the resources with sufficient performance required for the service to be successfully traded.

[0059] Hereon, as the conditions for procuring the resources with sufficient performance, a plurality of service resource providers 102 and a plurality of computer resources 251 can physically be distributed in a wide geographical range. The computer resources 251 are not necessarily placed in a common site. The means for accessing the data required for implementing the service and the means for data conversion are assumed prepared in standard compatibility forms used for ordinary communication on the Internet, for example, an XML format and a URL addressing scheme. Furthermore, data compression means and encryption means specific to a service may be used additionally.

[0060] (2) Resource reservation trading and brokering

[0061] The brokering server 204 circulates and trades the resources with

the performance parameters which have been quantitatively guaranteed by the credit data 205. Specifically, the trade brokering server 204 refers to the database of the performance data 208 for the resource providers and makes an anticipatory decision of what combination of the computer resources 251 managed by any administrator 103 of operating the resources for information processing services and a service any provider 102 of the resources for information processing services can satisfy the service performance request specifications (SLA) 201.

[0062] The brokering server 204 registers the performance request specifications 211 separated for the resource providers whose resources are expected to sufficiently fulfill the requirements of the performance request specifications according to a specific service type when they are merged and individual provider's consent data (resource invoice) for service offering on contract.

After reviewing these cited paragraphs, it is noted that Nagasawa only mentions in paragraph [0061] “the database of the performance data 208 for the resource”, not “historical performance data for the resource” as in the Applicant's invention. In paragraph [0038] reproduced below, Nagasawa defines “service performance data” as data that specifies “maximum time and average time estimated to be taken to execute the information processing service”.

[0038] In the constitution of the present invention, data to be written to the resource reservation ticket to be traded includes a requested service type and service performance data in which maximum time and average time estimated to be taken to execute the information processing service are specified and the brokering means performs at least either estimating whether the resources can execute the information processing service described in the performance request specifications or estimating how well the resources satisfy the performance request specifications.



In comparison, in the Applicant's invention the historical performance data is defined in the paragraph bridging pages 8 and 9 of the specification (reproduced below) as data for the performance of the resource measured by a service level monitor during the course of performance.

In further illustration of the present invention, FIG. 1 is a pictorial illustration of a system and process for SLA breach value estimation. The system of the present invention can include an SLA builder 110 configured to generate an SLA 130 based upon the performance of one or more resources 140. A service level monitor 160 can be coupled to the resources 140 as well and can monitor the performance of the resources 140, particularly in respect to the SLA 130. Specifically, during the course of performance, data 150 for the performance of the resources can be measured by the service level monitor 160. The data 150 subsequently can be written to a performance history database 170.

In rejecting the limitation of generating the estimated SLA breach value by processing retrieved historical performance data for the resource, Examiner stated on page 5 of the Latest Non-Final Office Action the following:

Nagasawa does not explicitly teach generating, with a computer hardware system, the estimated SLA breach value by processing the historical performance data for the resource; and displaying, using the computer hardware system, the estimated SLA breach value.

Betge teaches generating, with a computer hardware system, the estimated SLA breach value by processing the historical performance data for the resource; and . (See paragraphs [0046] – [0050], Betge)

For the convenience of the Examiner, paragraphs [0046]-[0050] of Betge cited by the Examiner are reproduced below:

[0046] In a preferred embodiment, the first calculation module 3 includes firstly an extraction module 6 capable of generating usage profiles of the service level agreements 7 from first data supplied in particular by the core routers Ri of the network and service level agreements between the network operator and its customers. The extraction module 6 preferably generates a usage profile for each SLA. Furthermore, the first data representing a record of network performance measurements, the extraction module 6 preferably generates usage profiles of the service level agreements 7 by extrapolation, using a trend evolution analysis technique. The extraction module 6 also delivers predictive or nonpredictive alarms, if an event occurs or risks occurring, based on analyzing the measurements and the measurement records.

[0047] Once the extraction module 6 has generated its usage profiles of the service level agreements 7, it communicates them to an aggregation module 8 of the first calculation module 3. This module determines the network usage predictive state from the usage profiles of the service level agreements 7 in particular, and preferably also from third data representative of information predicting user requirements.

[0048] For example, the third data consists of the future types of service level agreements likely to be entered into by the network operator and its current and/or future customers, and the predicted evolution of service subscriptions. It is derived by the operator from the results of market research and transmitted to the aggregation module 8, for example via a transmission module 9 of the graphical user interface 5.

[0049] The predictive state delivered by the aggregation module 8 is preferably a service level agreement usage predictive profile obtained by aggregating all service level agreement usage profiles, extrapolated from the first data received from the network, and then taking into account third data representative of future requirements. In fact, as previously indicated, the service level agreements consist of one or more service level specifications that define all technical parameters of the service (and the thresholds to be guaranteed). Each of these parameters is generally a real number whose value is estimated as a function of time, so that the record of a parameter generally takes the form of a curve. This applies in particular to the bandwidth, as shown in FIGS. 3 and 4. Consequently, aggregation is based on adding different curves associated with each parameter, for example a curve of the measurements (or extrapolation) and a curve obtained from the market research results. Weighting coefficients can be introduced, for example to give greater weight to some predictions, considered to be more reliable, or to some services, or to predictions rather than to market research curves.

[0050] Thus the system can determine a (re)planning proposal that is particularly accurate since it takes into account, firstly, the information (or parameters) representative of the network performance record and, secondly, predicted customer requirements in terms of resources and/or services.

Examiner did not explain how the above quoted paragraphs disclose the limitation of generating the estimated SLA breach value by processing retrieved historical performance data for the resource. After reviewing the above quoted paragraphs, it is noted that Betge discloses generating usage profiles of the service level agreements from first data (representing a record of network performance measurements) and the service level agreements.

**This is completely different from generating the estimated SLA breach value by processing retrieved historical performance data for the resource.** First, a usage profile is totally different from an estimated SLA breach value. Second, in Betge the usage profile is generated from the service level agreement, whereas in the Applicant's invention the estimated SLA breach value is generated for assisting the establishment of a service level agreement.

Finally, in rejecting the limitation of generating the estimated SLA breach value based upon a received compliance percentage, Examiner stated on page 7 of the Latest Non-Final Office Action the following:

Nagasawa and Betge teach the method of claim 29, wherein the generating comprises receiving a compliance percentage; and computing said estimated SLA breach value based upon the compliance percentage. (See paragraphs [0047] – [0049], Betge) See motivation to combine for claim 29

Paragraphs [0047]-[0049] of Betge have already been reproduced above. After reviewing paragraphs [0047]-[0049] of Betge, Applicant does not find any mentioning of a compliance percentage in those paragraphs. As described in page 11, lines 8-15 of the specification of the Applicant's application (reproduced below), by taking into consideration of the compliance percentage, the establishment of the SLA breach value can more closely reflect to the business concerns in setting an SLA breach value.

Importantly, in addition to permitting the direct establishment of an SLA breach value based upon a predictive estimate, a compliance percentage can be specified in lieu of a specific value responsive to which a precise SLA breach value can be suggested by the SLA breach value estimation process 210. For instance, where a 97% compliance rate has been requested, for a given time range, the breach value can be automatically computed using historical systems management data to yield 3% or fewer breaches of the SLA. In this way, the establishment of the SLA breach value can more closely reflect to the business concerns in setting an SLA breach value.

In view of the forgoing, Applicant believes that Examiner has failed to find that the prior art included each element claimed. Accordingly, Applicant submits that the Examiner has not established a prima facie case of obviousness.

#### IV. Conclusion

Applicant respectfully requests the withdrawal of the objection to the specification and the rejections under 35 U.S.C. § 103(a) owing to the amendments and foregoing remarks. The Applicant requests that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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